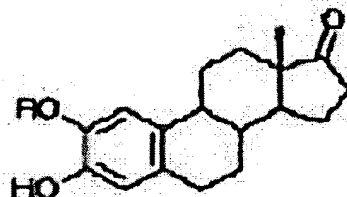


We claim:

1. A method for producing therapeutic compounds comprising the steps of:

using as a substrate a first chemical composition represented by the following

structure:

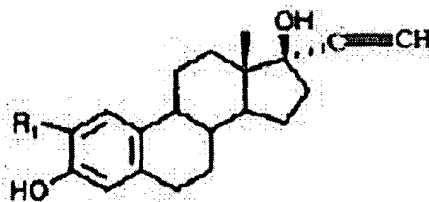


wherein R is selected from a group consisting of CH_3 , CH_2CH_3 , and $\text{CH}_2\text{C}_6\text{H}_5$;

10 and

through a substitution reaction, producing from said first chemical composition a

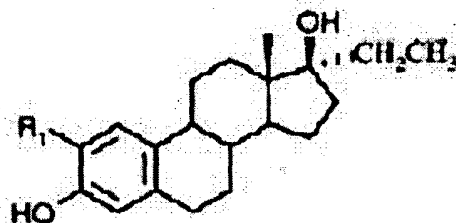
second chemical composition represented by the following structural formula:



wherein R_1 is selected from a group consisting of OCH_3 , OCH_2CH_3 ,

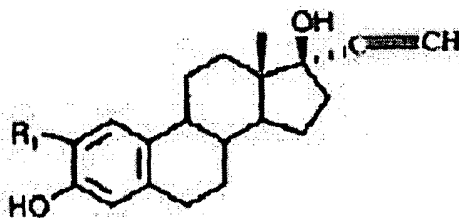
$\text{OCH}_2\text{C}_6\text{H}_5$ AND CH_2CH_3

2. The method of Claim 1 further comprising the step of producing from said second chemical composition a third chemical composition represented by the following structural formula:



wherein R₁ is selected from a group consisting of OCH₃, OCH₂CH₃,
10 OCH₂C₆H₅ AND CH₂CH₃.

3. A method of inducing apoptosis in cancerous tissues which are characterized as reactive to therapeutic doses of 2-Methoxyestradiol, comprising, in lieu of, or in combination with administering such doses of 2-Methoxyestradiol, the steps of:
15 selecting a chemical composition represented by the following structural formula:

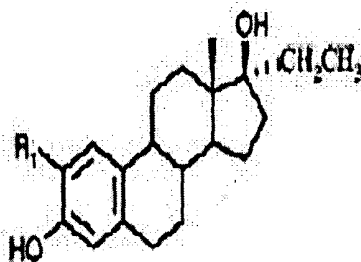


wherein R₁ is selected from a group consisting of OCH₃, OCH₂CH₃,
OCH₂C₆H₅ AND CH₂CH₃, and

administering a therapeutic dose of said chemical composition to said cancerous cells.

4. A method of inducing apoptosis in cancerous tissues which are characterized as reactive to therapeutic doses of 2-Methoxyestradiol, comprising, in lieu of, or in combination with administering such doses of 2-Methoxyestradiol, the steps of:
- 5 selecting a chemical composition represented by the following structural formula:

10

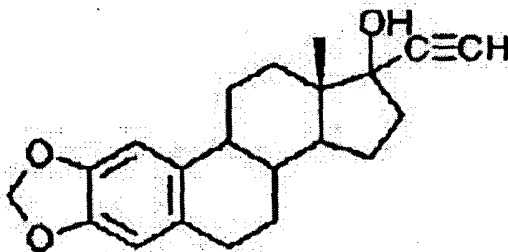


wherein R₁ is selected from a group consisting of OCH₃, OCH₂CH₃,
OCH₂C₆H₅ AND CH₂CH₃, and

- 15 administering a therapeutic dose of said first chemical composition to said cancerous cells.

5. A method of inducing apoptosis in cancerous tissues which are characterized as reactive to therapeutic doses of 2-Methoxyestradiol, comprising, in lieu of, or in combination with administering such doses of 2-Methoxyestradiol, the steps of: selecting a chemical composition represented by the following structural formula:

5



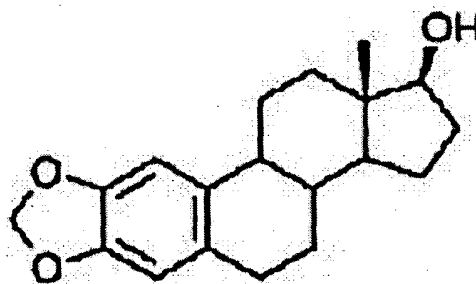
10

and

administering a therapeutic dose of said chemical composition to said cancerous cells.

6. A method of inducing apoptosis in cancerous tissues which are characterized as reactive to therapeutic doses of 2-Methoxyestradiol, comprising, in lieu of, or in combination with administering such doses of 2-Methoxyestradiol, the steps of:
selecting a chemical composition represented by the following structural formula:

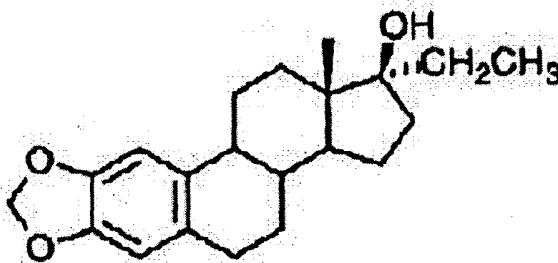
5 selecting a chemical composition represented by the following structural formula:



and

administering a therapeutic dose of said chemical composition to said cancerous cells.

7. A method of inducing apoptosis in cancerous tissues which are characterized as reactive to therapeutic doses of 2-Methoxyestradiol, comprising, in lieu of, or in combination with administering such doses of 2-Methoxyestradiol, the steps of: selecting a chemical composition represented by the following structural formula:



and
administering a therapeutic dose of said chemical composition to said cancerous cells.